

Work Order ID 140918

January 25, 2016 2:08:01 PM

647.1501
B140918
REV. A

140918

Page 1

Item ID: 647.1501 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Lower Deflector Assembly
Start Date: 1/25/2016 Start Qty: 5.00 *5* Cust Item ID:
Required Date: 1/29/2016 Req'd Qty: 5.00 *5* Customer:
Reference:

Approvals: Process Plan: 2A Date: 20160125 Tooling: _____ Date: _____ Run Start *NR1*
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
647.1500	A

110	Pick Kit	0.00					DAS 6 9-89		
110									
Packaging	Memo	0.00							JAN 25 2016
Packaging									

120		0.00							
120									
Small Fab	Memo	0.05							
Small Fab	Assemble as per dwg and apply loctite 598 on all faying surfaces per note 5.								
	A/R RTV LOCTITE 598: <u>M133436</u>								
	exp. date: <u>07/17</u>								

130	QC5- Inspect part completeness to step on W/O	0.00							
130									
QC	Memo	0.00							
Quality Control									

5X 16/01/26 DAS 36 9-89
(5) DAS 38 9-89
JAN 27 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Work Order ID 140918***140918***

Page 2

January 25, 2016 2:08:01 PM

Item ID: 647.1501 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Lower Deflector Assembly
Start Date: 1/25/2016 Start Qty: 5.00 ***5*** Cust Item ID:
Required Date: 1/29/2016 Req'd Qty: 5.00 ***5*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140

Identify as per dwg & Stock Location *ekool*

0.00

140

Packaging

Memo

0.00

Packaging

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

5 *QAS*
6
9-99 **JAN 28 2016**

150

QC21- Final Inspection - Work Order Release

0.00

150

QC

Memo

0.01

Quality Control

MCS **JAN 28 2016**

MCS **JAN 28 2016**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					

Root Cause		FAULT CATEGORY					
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
		OTHER : ☐					

Picklist Print

January 25, 2016 2:08:06 PM

Page 1

Work Order ID: 140918

140918

Parent Item: 647.1501

647 1501

Parent Item Name: Lower Deflector Assembly

Start Date: 1/25/2016

Required Date: 1/29/2016

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP REV:A 14.03.03 NEW ISSUE DD VERF:JLM IPP
REV:B 14.09.16 PER ECN14-621/REV NC2 DD VERF:JLM IPP REV:C
14.12.02 AS PER DWG REV.A DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MS20470AD4-12		Purchased	No				Each	100.0000		10			
MS20470AD4-12									**				
Rivet													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST309				100					
				m130297				100		10			
647.1511		Manufactured	No			110	Each	11.0000	1	5			
647 1511									**				
Lower Deflector													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				CCK090				11					
				123746				1		1			
				124241				10		4			
647.1512		Manufactured	No			110	Each	5.0000	1	5			
647 1512									**				
Breakaway Tip													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				CCK107				5					
				124517				3					
				128528				2					

JAN 25 2016

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 04743				SHEET 1 OF 1	
	DWG NO. 647.1500		REV: NC	PREPARED BY T. CROSS	DATE: 11/17/14	EFFECT ON DWG ☒ INC. ☐ UNINC.
	DWG TITLE: DEFLECTORS					
APPROVED BY: ENGR <i>[Signature]</i>		MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REVISED BOM				ECR: NONE

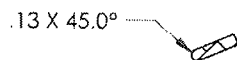
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1. NONE

20160125 *SH140918*

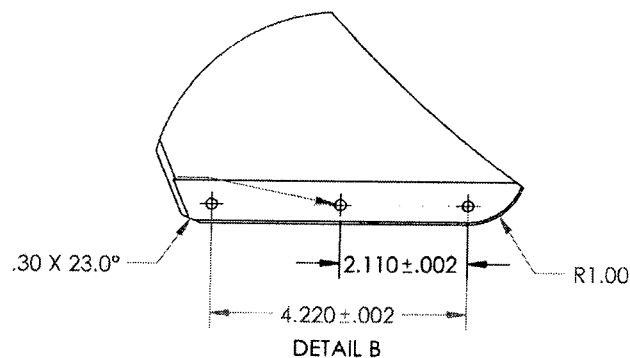
4	R	600.0523	2	RIVET	MS20470AD4-12	
F/N	TC	PART NUMBER	.1501 QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				☐ MDL ☐ INSTALL INSTRU ☐ ICA ☒ BOM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO

1
2
3
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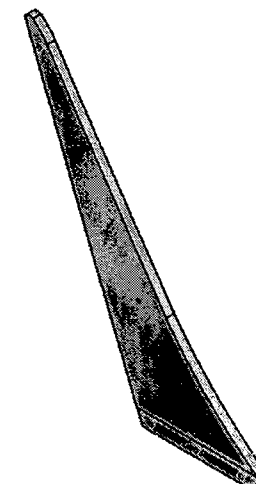
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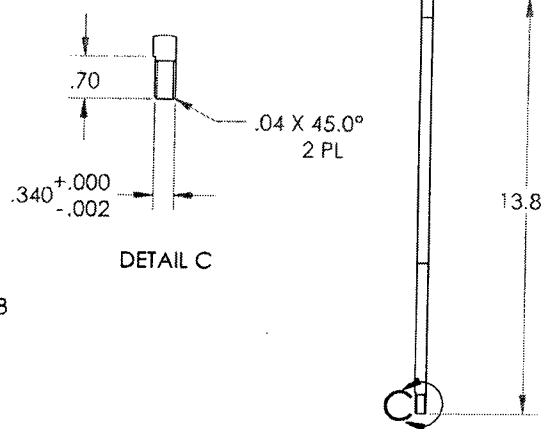
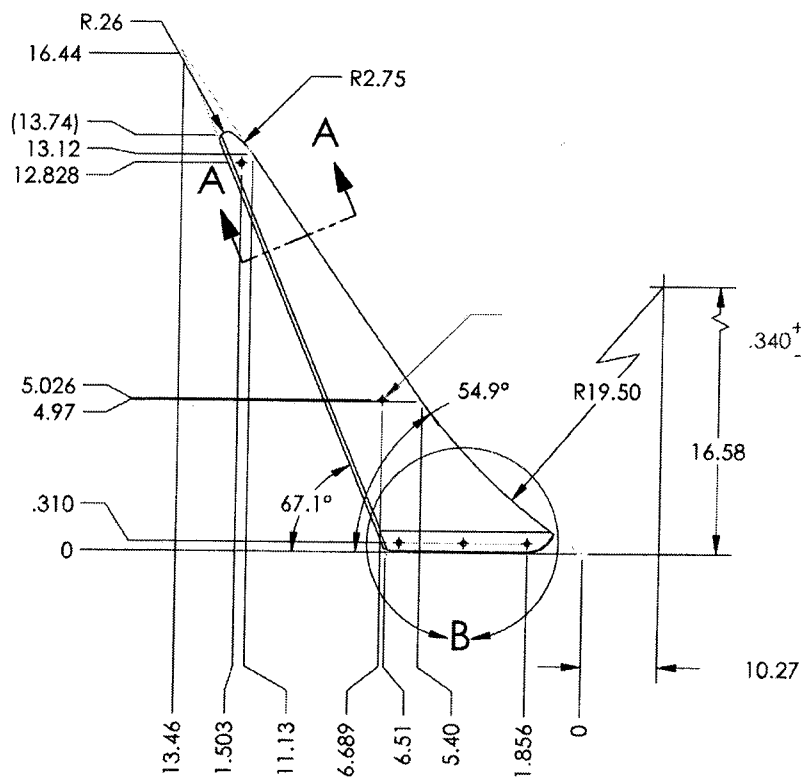
SECTION A-A



DETAIL B



647.1510



DETAIL C

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377J TYPE I CLASS N; 1-2 MIL MAX
- 3 DEBURR AND BREAK ALL SHARP EDGES
- 4 IDENTIFY IAW MPP-120
- 5 APPLY F/N 5 AS REQUIRED TO ALL FAYING SURFACES OF F/N 2 & 3 UPON ASSY

	A/R	S	601.2045	RTV, LOCTITE 598		
	2	4	600.0523	RIVET	MS20470AD4-12	
	1	3	647.1512	BREAKAWAY TIP		
	1	2	647.1511	LOWER DEFLECTOR		
		1	647.1510	UPPER DEFLECTOR		
			647.1501	LOWER DEFLECTOR ASSY		
	1501	FIND #	PART #	DESCRIPTION	MATL	SPEC.

QTY
NEXT ASSY (\$)
647.1400

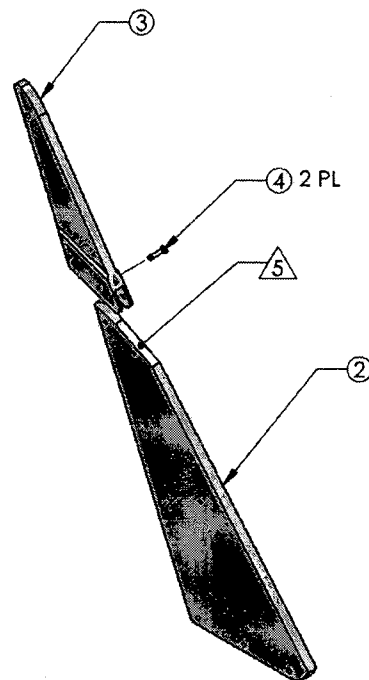
ORIGINAL DATE
(MO-DA-YR) 06-10-09
DRAWN BY: J. GARDNER
CHECKED: J. BRAYNO
DRAWING APPROVAL
P. BRAYNO
06-10-09
CONTRACT 116

PARTS LIST
APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

SIZE: 1/4" DIA. NO. 647.1500
B 07M26
SCALE: NONE
REV. A
SHEET 1 OF 5

1 2
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647.1501 SHOWN EXPLODED

ORIGINAL DATE 06-10-00
 DRAWN BY J. GARDNER
 CHECKED P. BRAVO
 DRAWING APPROVAL P. BRAVO
 CONTRACT NO.

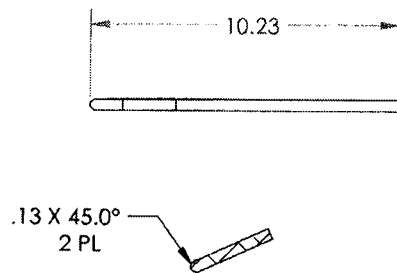
APICAL INDUSTRIES
 2608 TEMPLE HEIGHTS DR.
 OCEANSIDE, CA. 92056-3512 (760) 724-5300

DEFLECTORS

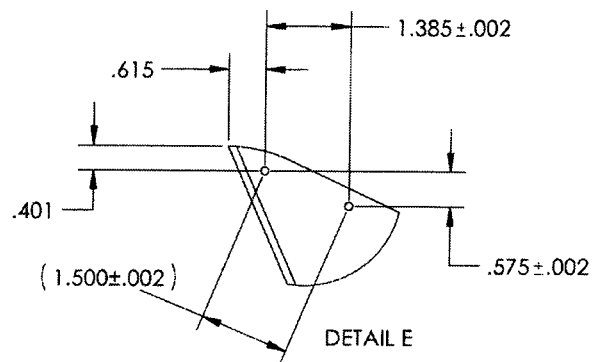
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 TOLERANCES ARE:
 1 PLACE DECIMALS ±.01
 2 PLACE DECIMALS ±.005
 ANGLES ±.5°

SHEET 2 OF 5
 SCALE: NONE
 647.1500
 REV. A

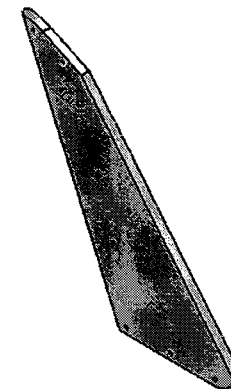
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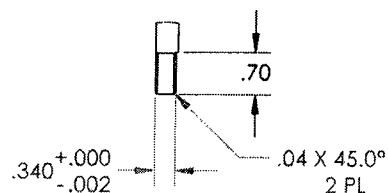
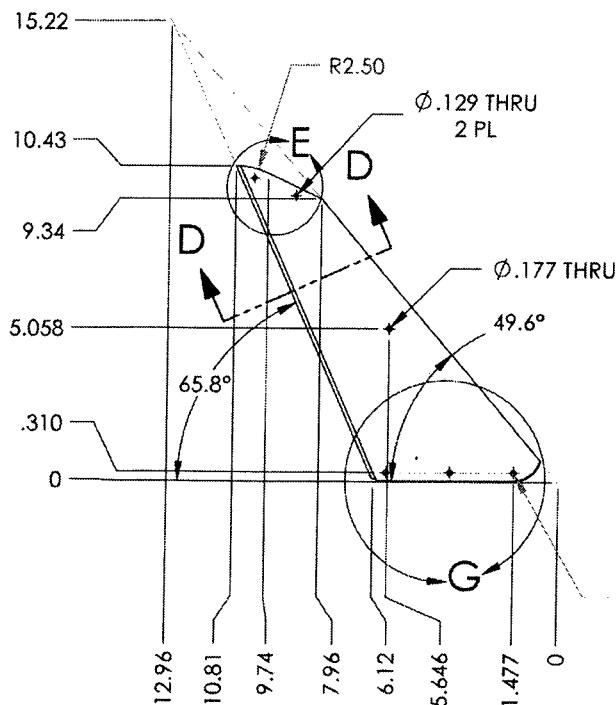
SECTION D-D



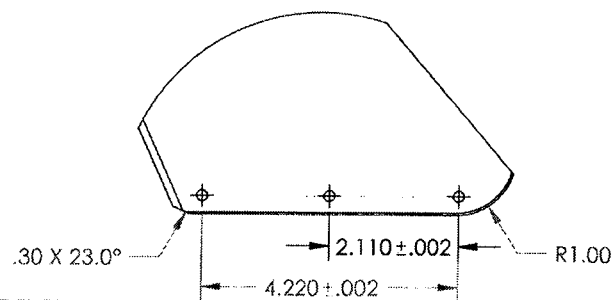
DETAIL E



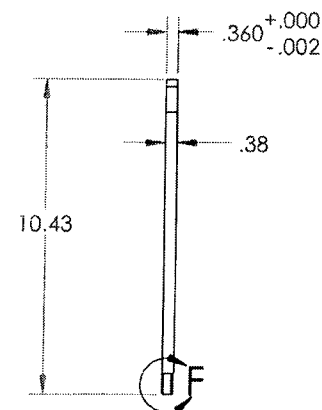
647.1511



DETAIL F



DETAIL G



ORIGINAL DATE: 06-15-09
DRAWN BY: C. GARDNER
CHECKED: P. BRAVO
DRAWING APPROVAL: P. BRAVO
CONTRACT No.

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

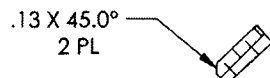
DEFLECTORS

UNLESS OTHERWISE SPECIFIED
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2 PLACE DECIMALS ±.01
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ANGLES ±.5°

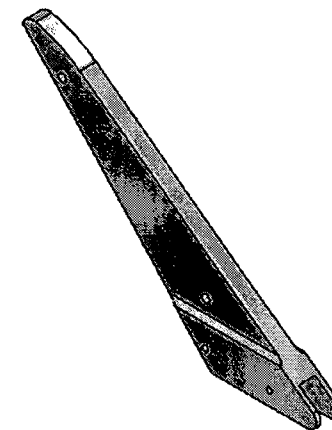
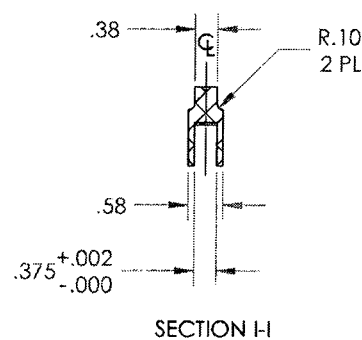
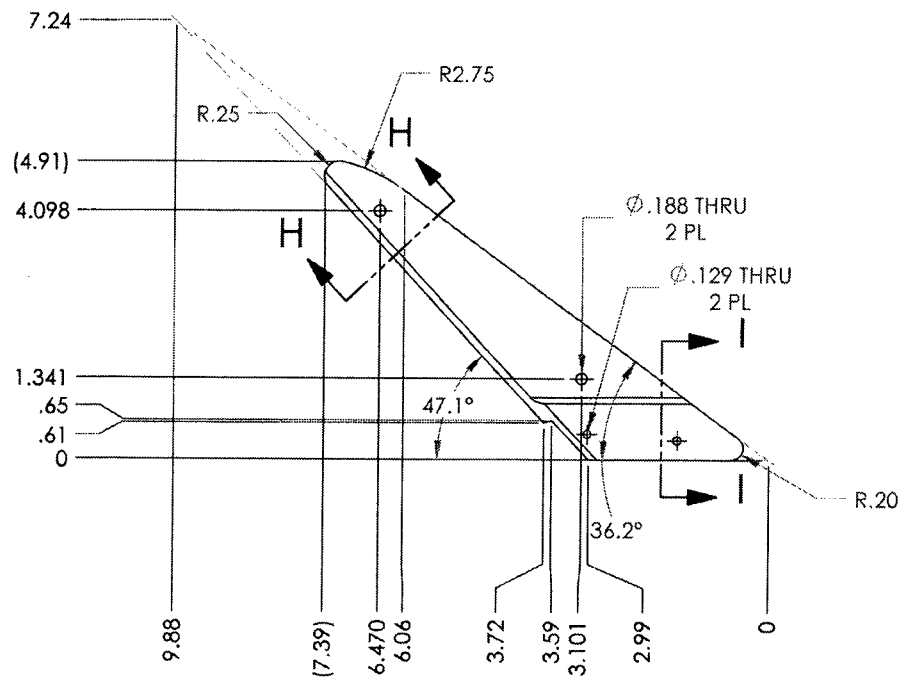
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PAGE CODE: 07M26
DWG. NO.: 647.1500
REV. A
SCALE: NONE
SHEET 3 OF 5

1 2 3 4 5 6 7 8

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SECTION H-H



647.1512

ORIGINAL DATE
DWG. DATE 06-10-07
DRAWN BY CHECKER
J. GARDNER P. BRAVO
DRAWING APPROVAL
P. BRAVO
CONTRACT NO.

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TOLERANCES ARE
2 PLACE DECIMALS ±.01
3 PLACE DECIMALS ±.005
ANGLES ±.5°

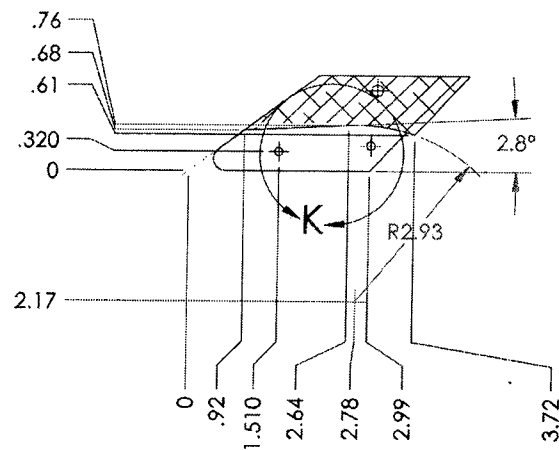
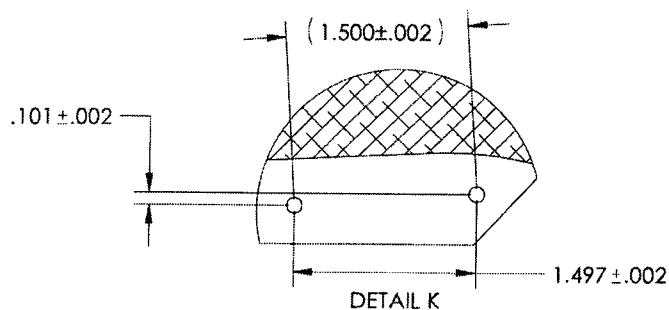
APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

DEFLECTORS

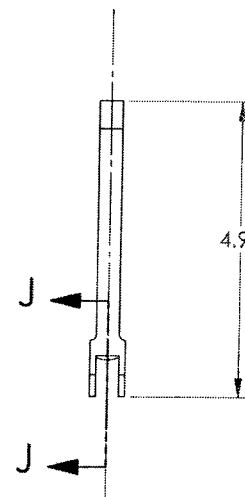
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B 07M26
SCALE: NONE
SHEET 4 OF 5

1 2 3 4 5 6 7 8

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SECTION J-J



647.1512 RIGHT VIEW

ORIGINAL DATE
(M/D-YR) DEDH9
DRAWN BY: J. CARDNER
DRAWING APPROVAL: P. BRAVO
CONTRACT NO.

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DIMENSIONS ARE IN INCHES
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3 PLACE DECIMALS ± .005
ANGLES ± .5°

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760) 724-5300

DEFLECTORS

SIZE: CAGE CODE DWG. NO. REV.
B 07M26 647.1500 A
SCALE: NONE SHEET 5 OF 5